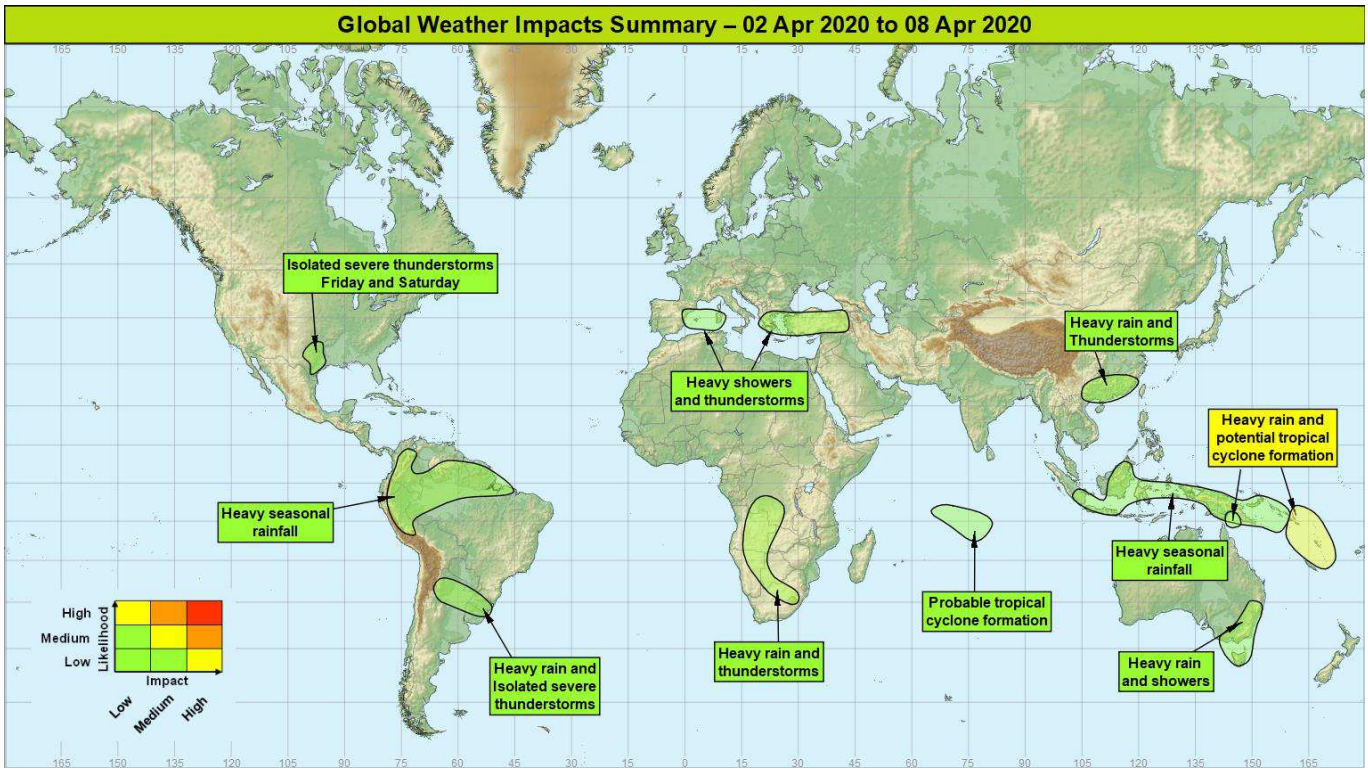
Daily Global Weather Impacts Assessment

Global Weather Impacts – Thursday 2nd to Wednesday 8th April 2020

Issued on Thursday 2nd April 2020

HEADLINES

- Probable tropical cyclone formation in the Southwest Pacific by or through the weekend.
- Heavy seasonal rainfall continues for parts of South America and Southeast Asia.

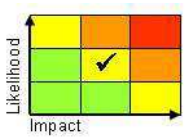


DISCUSSION

Tropical Cyclones

There are no active tropical cyclones, the follow areas are being monitored for development over the next 7 days.

Papua New Guinea, NE Australia, Southwest Pacific, Solomon Islands, New Caledonia and Vanuatu



Weather

Within a broad region of enhanced shower and thunderstorm activity it's possible that one, possibly two tropical cyclones could form in the coming days. The more likely area to see formation is close to the Solomon Islands, with any development subsequently be steered south-eastwards. This developing system is likely to threaten New Caledonia and/or Vanuatu through the weekend and into next week. Regardless of development widespread rainfall totals of 150-300 mm is expected across this region (close to the April average rainfall in the region), with peaks of over 800mm in some of the regions more mountainous islands. If a cyclone develops it could produce very strong winds and high seas, but this is a lower confidence part of the forecast. The second area of concern to the north of Cape York is likely to remain close to the coast of Papua New Guinea which will inhibit formation.

Discussion

This forecast may be amended at any time
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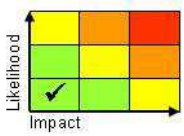
VPN: n6225 4319 Email: ggu@metoffice.gov.uk

With the movement of the MJO into the Western Pacific over the coming week the Southwest Pacific Convergence Zone (SPCZ) is expected to be very active. Within this zone there are strengthening model signals for TC formation. As discussed the stronger signal is for a system to form close to the Solomon Islands, with reasonable model agreement for this to move SE over the following days.

Expected Impacts

Rainfall with bring an enhanced risk of flash flooding and landslides, especially in areas where terrain is steep. Dangerous sea conditions may develop from the weekend, with a low likelihood of damaging winds and storm surge flooding, but these impacts are tied to the formation of a significant cyclone.

Southern Indian Ocean



Weather

A tropical depression over the south Indian Ocean, well to the NE of Mauritius is likely to strengthen into a cyclone over the coming days, This system is then expected to be steered south-eastwards over open ocean and is not expected to directly impact any land.

Discussion

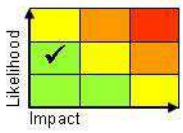
A Kelvin Wave (KW) running east along the equator has enhanced convection in the south shifted ITCZ in the central Indian Ocean. The ITCZ is expected to break down via shear instability (as often seen in the NW Pacific) and shed a circulation (containing showers and thunderstorms) which will likely consolidate into a tropical cyclone in the next 24 hours.

Expected Impacts

Slightly rougher than normal seas, particularly to the south of Diego Garcia.

Europe

Parts of southern and south-eastern Europe



Weather

Heavy rain, mountain snow and thunderstorms will affect parts of southern Europe through the coming week.

Eastern parts of Spain and the Balearic Islands will see further heavy showers and thunderstorms on Thursday, perhaps 50 mm of rain falling in a short period here.

However, southeast Europe and Turkey will see unsettled conditions through the rest of this week and the weekend, with heavy showers and thunderstorms at times across this region. Up to 75 mm could fall in a day, around twice the April average, with up to 150 mm in places through the next few days.

Snowfall will fall to relatively low elevations across parts of southeast Europe at times.

Discussion

A series of upper troughs will run east through the Mediterranean and southern Europe through the next few days, producing areas of deep convection and more organised areas of precipitation. However, an upper ridge following across Iberia and the western Mediterranean by the weekend to bring more settled weather here. Where the precipitation overlays cold air (such as across parts of southeast Europe) snow will fall down only 100-200 M above sea level at times.

Expected Impacts

Flash and some isolated fluvial flooding both likely, along with an enhanced risk of landslides in areas where terrain is steep. Snowfall across parts of southeast Europe will disrupt travel in the region.

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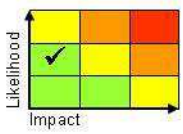
North America

Texas



Weather

Severe thunderstorms are possible across the central USA over the next couple of days. However the greatest risk is for Texas on Friday. These have the potential to bring heavy rainfall, strong winds and possibly the odd tornado. Accumulated rainfall of 50-100, locally 150 mm is possible. Conditions likely becoming fine across this region from Sunday.

Discussion

An upper trough will move east, and engage a very warm WBPT and dewpoint air being drawn north from the Gulf of Mexico in an increasingly strong low level jet. As this airmass destabilises profiles support organised thunderstorms in a strong vertical wind shear regime capable of generating strong wind gusts and a few tornadoes.

Expected Impacts

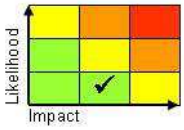
Localised property and infrastructure damage from a combination of flash flooding, damaging strong winds, and even an isolated tornado. Large hail and frequent lightning could also produce impacts.

Central America

Nil.

South America

Colombia, Peru, Ecuador, northern Brazil, Suriname, Guyana and Venezuela



Weather

Enhanced shower and thunderstorm activity is signalled to continue across much of the northern Andes and Amazon through this period. A further 150-300mm of rainfall is likely to fall across the area. This represents locally more than double the average rainfall for parts of this region which have been very wet over recent weeks and months.

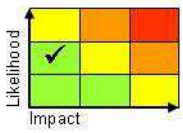
Discussion

Convective activity is forecast to remain well above average across the northern Andes over the next week. For Colombia and Ecuador, above average SST's are likely contributing to the increased activity, with onshore winds triggering convection up against the western upslopes.

Expected Impacts

Continued threat of landslides and flash flooding, particularly in the steep terrain of the northern Andes.

Northern Argentina, Uruguay and southeast Brazil



Weather

Heavy rain and isolated severe thunderstorms should ease from the south through Thursday, In addition to torrential rain bringing up to 100 mm in a few hours, isolated storms forward of the main precipitation envelope may bring large hail, strong winds, and perhaps an isolated tornado.

Discussion

Warm tropical air is drawn southwards ahead of a mid-latitude cold front which will be driven N/NE across South America by a mid-latitude upper trough. Ahead of this front, conditions will become conducive to severe thunderstorm development with large CAPE (evidence of an Elevated Mixed Layer EML) and a conducive highly sheared environment.

Expected Impacts

Flash flooding and localised fluvial flooding, with a low risk of some highly localised damage from strong winds, large hail or even an isolated tornado.

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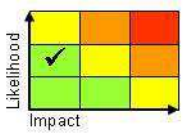
Africa

Southern Angola, northeastern Namibia, Botswana, South Africa and Lesotho, parts of DRC



Weather

Scattered heavy showers and thunderstorms, locally severe, will affect this region during much of the next week. Some of these thunderstorms will be capable of producing large hail, frequent lightning and strong winds. The showers will be capable of bringing 50mm of rainfall in a short duration. This weekend activity will tend to ease from the south, while intensifying further north.

Discussion

A series of upper troughs will engaging a plume of warm, tropical air being drawn southward. Forecast instability and deep layer shear support upscale development into organised multicells and some persistence overnight.

Expected Impacts

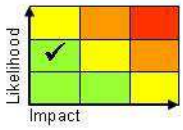
Flash flooding and further exacerbation of ongoing flood impacts across southern Angola following recent heavy rain. Localised damage to property, infrastructure and crops from a combination of lightning, large hail and strong winds.

Middle East

Nil.

Asia

Southern China



Weather

A further period of heavy rain is expected to begin in this region on Today and continue into early next week. During this period, 50-100mm of rainfall is likely to fall quite widely with peaks of 200-250mm possible. In many locations half of the total precipitation will likely fall in less than 24 hours. The average rainfall for April in this region is between 125 mm and 200 mm.

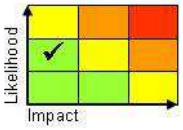
Discussion

A strong baroclinic zone has become established across this region and this will remain fairly slow-moving. Various shortwave features in a modest sub-tropical jet will engage this zone, generating areas of heavy rainfall and thunderstorms which will run eastwards. However as this is near the start of the wet season in this area, impacts are expected to be minimal.

Expected Impacts

Localised flash flooding causing damage to property and infrastructure.

Malaysia, Indonesia and Papua New Guinea



Weather

Shower and thunderstorm activity is expected to remain more widespread than normal over this week with many places receiving 50-100 mm during this time, with 300 mm for a few spots. The heaviest rain is expected to occur over New Guinea, including Port Moresby, during this period. As discussed above there is a very low risk of a Tropical Cyclone forming in this region.

Discussion

The MJO will track across this region over the coming week, and in addition to this multiple tropical waves will remain active in the region. All combined these will continue to promote above average rainfall.

Expected Impacts

Increased risk of flash flooding and landslides, particularly in areas that have been affected by recent heavy rainfall.

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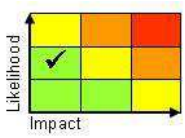
Australasia

Northern Australia, Papua New Guinea, Southwest Pacific, Solomon Islands, New Caledonia and Vanuatu
– See the Tropical Cyclones section.

Southeastern Australia



Weather
Heavy showers and thunderstorms will affect southeastern parts of Australia through the rest of this week, with up to 50-75 mm of rain falling in a 6-12 hour period in places. Hail and frequent lightning is also possible.
Drier and cooler conditions become established across this region by the weekend.

Discussion
A shortwave upper trough will draw a warm and moist tropical airmass southwards and engage this leading to shower and thunderstorm development. A cold front will then be driven north-eastwards by a longer wave upper trough and bring drier and cooler conditions to this region by the weekend with the showers becoming displaced to the north (where these are more typical).

Expected Impacts
Localised flash flooding. Lower likelihood of hail / lightning impacts.

Additional Information

Nil.

Issued at: 020800 UTC **Meteorologists:** Mark Sidaway / Tony Wardle **Global Guidance Unit**

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VPN: n6225 4319 Email: ggu@metoffice.gov.uk